

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	09/432,503
				Filing Date	November 2, 1999
				First Named Inventor	Cech, Thomas R.
				Art Unit	1635
				Examiner Name	Jon E. Angell
Sheet	1	of	2	Attorney Docket Number	015389-002611US

U.S. PATENT DOCUMENTS+					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number Kind Code ² (if known)			
	A1				
	A2				

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Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)				
	B1							<input type="checkbox"/>
	B2							<input type="checkbox"/>

* No citations/refs on this page

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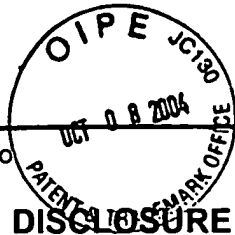
Institute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
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				<i>Examiner Name</i>	Jon E. Angell
Sheet 2 of 2				<i>Attorney Docket Number</i>	015389-002611US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C1	CAMPBELL, KEITH & WILMUT, IAN "Totipotency or Multipotentiality of Cultured Cells: Applications and Progress" Theriogenology, January 1997, pp. 63-72, Vol. 47, Issue 1, Elsevier Science Inc.	
	C2	GEARHART, JOHN "New Potential for Human Embryonic Stem Cells" Science, November 6, 1998; pp. 1061-1062, Vol. 282, Issue 5391.	
	C3	THOMSON, JAMES A. et al. "Embryonic Stem Cell Lines Derived from Human Blastocysts" Science, November 6, 1998; pp. 1145-1147, Vol. 282, Issue 5391.	
	C4		

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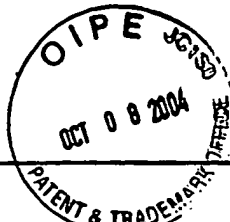
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INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

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Sheet 1 of 10

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First Named Inventor	Cech, Thomas R., et. al.
Art Unit	1652
Examiner Name	Peter P. Tung
Attorney Docket Number	015389-002611US

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Examiner	Chg No.	Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	08/751,189	11-15-98	Harrington, et al.	
	AB	60/038,750	02-20-1997	Counter, et al.	
	AC	3,817,837	06-18-1974	Tanenholts et al.	
	AD	3,860,752	11-28-1974	Schuurs et al.	
	AE	3,839,350	02-17-1076	Kronick et al.	
	AF	3,896,345	12-01-1976	Ullman et al.	
	AG	4,275,149	06-23-1081	Ullman et al.	
	AH	4,277,437	07-07-1981	Magglo	
	AJ	4,368,241	12-28-1982	Tom et al.	
	AJ	4,683,195	07-28-1987	Mullis et al.	
	AK	4,683,202	07-28-1987	Mullis	
	AL	4,816,567	03-28-1988	Cabilly et al.	
	AM	4,965,188	10-23-1990	Mullis et al.	
	AN	5,489,508	02-06-1998	West et al.	
	AO	5,583,016	12-10-1996	Villeponteau et al.	
	AP	5,747,317	05-05-1988	Cao	
	AO	5,770,422	06-23-1988	Collins	
	AR	6,093,809	07-25-2000	Cech, et al.	
	AS	6,258,535 - B1	07-10-2001	Villeponteau et al.	
	AT	6,261,556 - B1	07-17-2001	Weinrich et al.	
	AU	6,261,838 - B1	07-17-2001	Cech et al.	
	AV	6,093,809	07-25-2000	Cech et al.	
	AW	6,168,178	12-29-2000	Cech et al.	
	AX	6,476,789 B1	11-09-2002	Cech et al.	

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		Country Code ²	Number ⁴ Kind Code ² (if known)				
	AY	JP	08154575-A		08-17-97		
	AZ	PCT	WO 84/03564		09-13-84		
	BA	PCT	WO 96/13382		05-18-95		
	BB	PCT	WO 96/01835		01-25-98		
	BC	PCT	WO 96/12811		05-02-98		
	BD	PCT	WO 98/18580		06-27-98		
	BE	PCT	WO 96/40868		12-19-98		
	BF	PCT	WO 98/01542		01-15-98		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet **2** of **12 10**

Complete If Known

Application Number	09/432,503
Filing Date	November 2, 1999
First Named Inventor	Cech, Thomas R., et. al.
Art Unit	1652
Examiner Name	Peter P. Tung
Attorney Docket Number	015389-002611US

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		Number	Kind Code ¹ (if known)			
	BG		PCT	WO 89/01543		01-15-98
	BH		PCT	WO 88/07838		03-05-98
	BI		PCT	WO 88/08938		02-26-98
	BJ		PCT	WO 88/21343		05-22-98
	BK		PCT	WO 88/37181		08-27-98
	BL		PCT	WO 88/45450		10-15-98
	BM		PCT	WO 88/59040		12/30/98
	BN		PCT	WO 88/01560		01/14/99

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		First Named Inventor	Cech, Thomas R., et. al.
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		Examiner Name	Peter P. Tung
Sheet 3 of 12 05/0	Attorney Docket Number	015389-002611US	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T 2
	BO	1994 Genome Issue of <i>Science</i> (265:1981f)	
	BP	Anderson and Young, "Quantitative Filter Hybridization" in <i>Nucleic Acid Hybridization</i> pp73-111 (1985)	
	BO	Ausubel et al., (1989); Current Protocols in Molecular Biology, pp 5.1-5.11, 16.1-16.3 and 16.9-16.20; John Wiley & Sons, New York NY	
	BR	Autexier et al., "Reconstitution of human telomerase activity and identification of a minimal functional region of the human telomerase RNA," (1996) <i>EMBO J.</i> 15:5928	
	BS	Autexier and Greider, "Functional reconstitution of wild-type and mutant <i>Tetrahymena</i> telomerase," (1994) <i>Genes Develop.</i> 8:563	
	BT	Berger and Kimmel, <i>Guide to Molecular Cloning Techniques</i> , (1987): Meth. Enzymol.; vol. 152; pp 305-389; Academic Press; San Diego CA	
	BU	Blessman et al., "Addition of Telomere-Associated HeT DNA Sequences "Heals" Broken Chromosome Ends in <i>Drosophila</i> ," (1990) <i>Cell</i> , 61:663	
	BV	Bitter et al., "Expression and secretion vectors for yeast," <i>Meth Enzymol.</i> , (1987) 153:516	
	BW	Blackburn and Chiu, "Non-nucleosomal packaging of a tandemly repeated DNA sequence at termini of extrachromosomal DNA coding for rRNA in <i>Tetrahymena</i> ," (1981) <i>Proc. Natl. Acad. Sci.</i> , 78:2263	
	BX	Blackburn and Gall, "A tandemly repeated sequence at the termini of the extrachromosomal ribosomal RNA genes in <i>Tetrahymena</i> ," (1978) <i>J. Mol. Biol.</i> , 120:33	
	BY	Blackburn, "Telomerases," (1992) <i>Annu. Rev. Biochem.</i> , 61:113	
		Bodnar et al., "Extension of Life-Span by Introduction of Telomerase into Normal Human Cells," (1998) <i>Science</i> , 279:349	
		Bradford, "A Rapid and Sensitive method for the Quantitation of Microgram Quantities of Protein Utilizing the Principle of Protein-Dye Binding," (1976) <i>Anal. Biochem.</i> , 72:246	
		Braunstein et al., "Transcriptional silencing in yeast is associated with reduced nucleosome acetylation," (1993) <i>Genes Develop.</i> 7:592	

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Sheet	4	of	10 / 0

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		Calvo <i>et al.</i> , "Identification of hnRNP P2 as TLS/FUS using electrospray mass spectrometry," (1995) <i>RNA</i> , 1:724	
		Caruthers <i>et al.</i> , "New chemical methods for synthesizing polynucleotides," (1980) <i>Nucleic Acids Res. Symp. Ser.</i> , 215-223	
		Chan and Tye, "Organization of DNA sequences and replication origins at yeast telomeres," (1983) <i>Cell</i> , 33:563	
		Colbere-Garapin <i>et al.</i> , "A new dominant hybrid selective marker for higher eukaryotic cells," (1981) <i>J. Mol. Biol.</i> , 150:1	
		Cole <i>et al.</i> , "The EBV-hybridoma technique and its application to human lung cancer," <i>Monoclonal Antibodies and Cancer Therapy</i> , Alan R. Liss Inc., New York NY 77-96 (1985)	
		Collins <i>et al.</i> , "Purification of Tetrahymena telomerase and cloning of genes encoding the two protein components of the enzyme," (1995) <i>Cell</i> , 81:677	
		Conrad <i>et al.</i> , "RAP1 protein interacts with yeast telomeres in vivo: Overproduction alters telomere structure and decreases chromosome stability," (1990) <i>Cell</i> , 63:739	
		Coombes, <i>Dictionary of Biotechnology</i> , (1994): pp. 101-102, 283, 301 and 332; Stockton Press, New York NY	
		Cote <i>et al.</i> , "Generation of human monoclonal antibodies reactive with cellular antigens," (1983) <i>Proc. Natl. Acad. Sci.</i> , 80:2026	
		Counter <i>et al.</i> , "The catalytic subunit of yeast telomerase," (1997) <i>Proc. Natl. Acad. Sci.</i> , 94:9202	
		Counter <i>et al.</i> , (1994) <i>Proc. Natl. Acad. Sci.</i> , 91:2900	
		Creighton, <i>Proteins, Structures and Molecular Principles</i> , (1983): pp. 1-60; WH Freeman and Co; New York, NY	
		Dieffenbach and Dveksler, <i>PCR Primer, a Laboratory Manual</i> ; (1995) pp. 131-136, 453-462 and 507-580; Cold Spring Harbor Press, Plainview NY	
		Duplax <i>et al.</i> , "Quantitative analysis of polymerase chain reaction products using biotinylated dUTP incorporation," (1993) <i>Anal. Biochem.</i> , 212:229	

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		Fang et al., "Oxytricha telomere-binding protein: separable DNA-binding and dimerization domains of the α-subunit," <i>Genes Develop.</i> 7:870 (1993) and Gray et al., (1991) <i>Cell</i> 67:807	
		Feng et al., "The RNA Component of Human Telomerase," (1995) <i>Science</i> , 269:1236	
		GenBank Accession No. AA281298; April 2, 1997	
		Genbank accession no. AA289878; April 18, 1997	
		Genbank accession no. AA311750; April 19, 1997	
		Gilley et al., "Altering specific telomerase RNA template residues affects active site function," (1995) <i>Genes Develop.</i> , 9:2214	
		Gottesching and Cech, "Chromatin Structure of the Molecular Ends of Oxytricha Mononuclear DNA: Phased Nucleosomes and a Telomeric Complex," (1984) <i>Cell</i> , 38:501	
		Gottesching and Zaklan, "Telomere proteins: specific recognition and protection of the natural termini of Oxytricha macronuclear DNA," (1986) <i>Cell</i> 47:195	
		Grant et al., <i>Meth Enzymol.</i> , (1987) 153:516-544	
		Greenwood et al., "Phylogenetic relationships within the class oligohymenophorea, phylum ciliophora, inferred from the complete small subunit rRNA gene sequences of <i>Colpidium campyllum</i> , <i>Glaucoma chattoni</i> , and <i>Opliothoe henneguyi</i> " (1991) <i>J. Mol. Evol.</i> , 3:163	
		Greider and Blackburn, "A telomeric sequence in the RNA of Tetrahymena telomerase required for telomere repeat synthesis," (1988) <i>Nature</i> , 337:331	
		Greider and Blackburn, "Identification of a specific telomere terminal transferase activity in Tetrahymena extracts," (1986) <i>Cell</i> , 43:405	
		Greider, "Telomerase is processive," (1991) <i>Mol. Cell. Biol.</i> , 11:4572	
		Greider, "Telomere Length Regulation," (1996) <i>Ann. Rev. Biochem.</i> , 65:337	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	09/432,503
		Filing Date	November 2, 1999
		First Named Inventor	Gech, Thomas R., et. al.
		Art Unit	1652
		Examiner Name	Peter P. Tung
Sheet 6 of 10	Attorney Docket Number	015389-002611US	

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		Hampton et al., <i>Serological Methods & Laboratory Manual</i> ; (1990); pp. 33-86, 179-286; APS Press, St Paul MN	
		Harrington et al., "A Mammalian Telomerase-Associated Protein," (1997) <i>Science</i> , 275:973	
		Harrington et al., "Human telomerase contains evolutionarily conserved catalytic and structural subunits," (1997) <i>Genes Dev.</i> , 11:3109	
		Hartman and Mulligan, "Two dominant-acting selectable markers for gene transfer studies in mammalian cells," (1988) <i>Proc. Natl. Acad. Sci.</i> , 85:8047	
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		Hudson et al., "An STS-based map of the human genome," (1995) <i>Science</i> , 270:1945	
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		Klobutcher et al., "All gene-sized DNA molecules in four species of hypotrichs have the same terminal sequence and an unusual 3' terminus," (1981) <i>Proc. Natl. Acad. Sci.</i> , 78:3015	
		Koshler and Milstein, "Continuous cultures of fused cells secreting antibody of predefined specificity," (1976) <i>Nature</i> 266:495	
		Kostor et al., "The production of monoclonal antibodies from human lymphocytes," (1983) <i>Immunol. Today</i> 4:72	

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		Filing Date	November 2, 1999
		First Named Inventor	Cech, Thomas R., et. al.
		Art Unit	1652
		Examiner Name	Peter P. Tung
(use as many sheets as necessary)		Attorney Docket Number	015389-002611US
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		Lamond et al., "Probing the structure and function of U2 snRNP with antisense oligonucleotides made of 2'-OMe RNA," (1989) <i>Cell</i> , 58:383	
		Landvay et al., "Senescence mutants of <i>Saccharomyces cerevisiae</i> with a defect in telomere replication identify three additional EST genes," (1996) <i>Genetics</i> , 144	
		Lingler et al., "Purification of telomerase from <i>Euplotes aediculatus</i> : requirement of a primer 3' overhang," (1996) <i>Proc. Natl. Acad. Sci.</i> , 93:10712	
		Lingler et al., "Reverse transcriptase motifs in the catalytic subunit of telomerase," (1997) <i>Science</i> , 276:561	
		Lingler et al., "Telomerase RNAs of different ciliates have a common secondary structure and a permuted template," (1994) <i>Genes Develop.</i> , 8:1984	
		Lingner et al., "Telomerase and DNA End Replication: No Longer a Lagging Strand Problem?," (1995) <i>Science</i> , 269:1533	
		Lowy et al., "isolation of transforming DNA: Cloning the hamster apt gene," (1980) <i>Cell</i> , 22:817	
		Lustig and Pates, "Identification of yeast mutants with altered telomere structure," (1986) <i>Proc. Natl. Acad. Sci.</i> , 83:1398	
		Maddox et al., "Elevated serum levels in human pregnancy of a molecule immunochemically similar to eosinophil granule major basic protein," (1983) <i>J. Exp. Med.</i> , 158:1211	
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		Melby et al., "Quantitative measurement of human cytokine gene expression by polymerase chain reaction," (1993) <i>J. Immunol. Meth.</i> , 159:236	
		Merrifield, "Solid phase peptide synthesis. I. The synthesis of a tetrapeptide," (1963) <i>J. Am. Chem. Soc.</i> , 85:2149	

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		Filing Date	November 2, 1999
		First Named Inventor	Cech, Thomas R., et. al.
		Art Unit	1652
		Examiner Name	Peter P. Tung
		Attorney Docket Number	015989-002611US
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		Murray, in <i>McGraw Hill Yearbook of Science and Technology</i> , (1992) McGraw Hill, New York NY, pp 191-196	
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		Nielsen et al., (1993) "Peptide nucleic acids (PNAs): Potential antisense and anti-gene agents," <i>Anticancer Drug Des.</i> , 8:53	
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		Prescott, "The DNA of ciliated protozoa," (1994) <i>Microbiol. Rev.</i> , 58:233	
		Price, (1993) <i>Blood Rev.</i> , 7:127	
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		Romero and Blackburn, "A conserved secondary structure for telomerase RNA," (1991) <i>Cell</i> , 67:343	
		Sambrook et al., <i>Molecular Cloning. A Laboratory Manual</i> ; (1989); pp. 8.1-8.86 and 16.1-17.44; Cold Spring Harbor Press, Plainview NY	

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		First Named Inventor	Cech, Thomas R., et. al.
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		Examiner Name	Peter P. Tung
		Attorney Docket Number	015389-002611US
Sheet	9	of	10 / 0

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		Sentell et al., "Transcription of yeast telomere alleviates telomere position effect without affecting chromosome stability." (1994) <i>Proc. Natl. Acad. Sci.</i> , 91:12061	
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		Scharf et al., "Heat stress promoters and transcription factors." (1994) <i>Result Probl. Cell Differ.</i> 20:125	
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		Weslinger et al., "Origin activation and formation of single-strand TQ ₁₋₆ tails occur sequentially in late S phase on a Yeast linear plasmid," (1993) <i>Mol. Cell. Biol.</i> , 13:4097	

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		First Named Inventor	Cech, Thomas R., et. al.
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		Wellinger et al., "Saccharomyces Telomeres Acquire Single-Strand TG ₁₋₃ Tails Late In S Phase," (1993) <i>Cell</i> 72:51	
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